

COMPREHENSIVE CANCER CENTER

2015 • VOLUME XXXI • NUMBER 3

AN NCI-DESIGNATED COMPREHENSIVE
CANCER CENTER SINCE 1971

A group of six women are posed on a modern staircase with a glass railing. They are dressed in professional attire, including blouses, jackets, and dresses. The background shows a large window with a view of greenery outside.

WOMEN *in* SCIENCE

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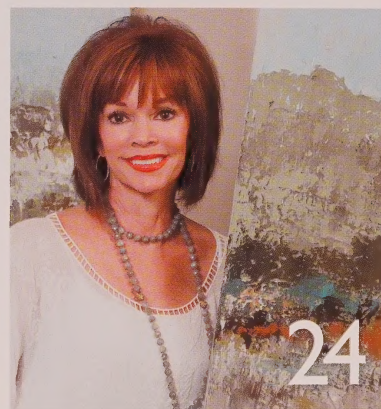
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GIVING TO THE CENTER

There are a variety of ways to give to the UAB Comprehensive Cancer Center. All donations are tax-deductible as allowed by law and may be designated for the cancer or research area of your choice. Every dollar stays here in Birmingham and is directly applied to cancer research and treatment.

Donations may be made by visiting the Cancer Center's Web site, uab.edu/cancer, or by calling the Office of Development and Community Relations at (205) 934-1603.

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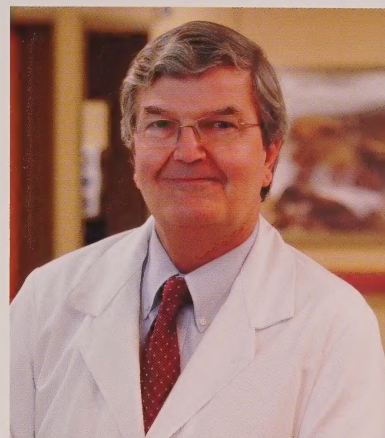
Produced by the Office of Development and
Community Relations.

news from the director

IN THIS ISSUE of *UAB Comprehensive Cancer Center Magazine*, we introduce you to some of our senior leaders as part of our special “Women in Science” feature. News stories in recent years have shone a spotlight on the lack of women in the scientific and medical fields, and – thanks in part to social media – there has been a tremendous movement encouraging more women to enter these industries.

I am proud to say that the UAB Comprehensive Cancer Center has a long history of diversity among its faculty and staff, and I am especially proud that six members of our current senior leadership team are women. Each of them brings a unique and different perspective to their role within the Cancer Center, and we are extremely fortunate to have them at our institution. I know you’ll enjoy reading about each one of these brilliant scientists and learning how they became involved in cancer research and came to UAB.

In addition to our cover story, several of our feature stories continue this issue’s “women in science” theme. For instance, our center profile is Smita Bhatia, M.D., M.P.H., an internationally renowned expert in cancer outcomes research who recently joined UAB from the City of Hope Cancer Center in Los Angeles. We also give you an update on our Advanced Imaging Facility, led by Janet Eary, M.D., as well as results from our Patient Care Connect Program, which is directed by Gabrielle Rocque, M.D. We also feature a story on the great work being done by our Deep South Network for Cancer Control, led by Claudia Hardy, M.P.A.

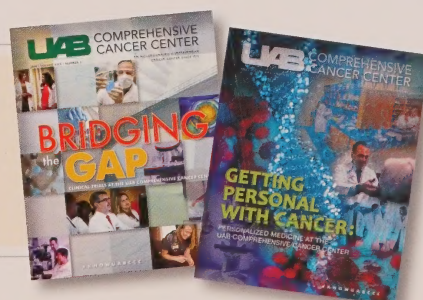


As always, we recognize several community members and organizations that are making a difference in the fight against cancer by funding research at our center. This financial support is critical as it provides us the flexible dollars necessary to jumpstart research and which can then be leveraged for large grants from external sources.

That research is the key to us achieving our vision of eliminating cancer as a major public health problem, and your support – and investment – in the UAB Comprehensive Cancer Center will help us make that a reality. We invite you to learn more, and we thank you for your support.

Edward Partridge, M.D.

*Director and Evalina B. Spencer
Chair in Oncology*



For a free subscription to *UAB Comprehensive Cancer Center*, please call (205) 934-0321 or send an e-mail with your name and address to jtill@uab.edu.



WOMEN *in* SCIENCE

Senior Leaders of the UAB Comprehensive Cancer Center

By JOSH TILL and HILARY MEARES

In the United States today, women are better represented in the workforce than ever before. According to the U.S. Department of Labor, women comprise nearly half of the total U.S. workforce at 47 percent. In recent years, more than half of the bachelor's degrees awarded in all academic fields – 57 percent – were earned by women.

One area of concern, however, is the lack of women in STEM fields – Science, Technology, Engineering and Mathematics. For example, statistics show that women make up only:

- **39 percent** of chemists and material scientists
- **27.9 percent** of environmental scientists
- **15.6 percent** of chemical engineers
- **12.1 percent** of civil engineers
- **8.3 percent** of electrical engineers

Furthermore, recent data shows that only around 32 percent of physicians in the United States are women, and in Alabama, that number is even lower – 26 percent.

While these numbers are low, they are fortunately trending upward. In the last decade, the number of women receiving doctorate degrees in STEM-related fields has risen to almost 50 percent. Women

now comprise 28 percent of all workers in STEM occupations, up from 23 percent in 1993. Growth among women has been strongest in the biological sciences. In 2010, 48 percent of biological, agricultural and environmental scientists were women – more than double from that of 1993.

The UAB Comprehensive Cancer Center has a longstanding tradition of diversity among its faculty, staff and particularly its leadership. Of the Cancer Center's senior leadership team, almost half are women, and all are brilliant, talented scientists who are leaders in their fields and bring unique talents and expertise to their work at the Cancer Center.

In this issue of *UAB Comprehensive Cancer Center Magazine*, we introduce you to each of these six women. We hope you enjoy getting to know each one and learning how they came to UAB and how they are meeting the challenges of leading the way in the fight against cancer.

Of the Cancer Center's senior leadership team, almost half are women, and all are brilliant, talented scientists who are leaders in their fields and bring unique talents and expertise to their work at the Cancer Center.



Etty "Tika" Benveniste, Ph.D.

Associate Director for Basic Research

Professor and Chair of Cell, Developmental and Integrative Biology

Alma B. Maxwell UAHSF Endowed Chair in Biomedical Research

Senior Associate Dean for Research, Administration and Development

FINDING CURES, FINDING A HOME

As associate director for basic research at the UAB Comprehensive Cancer Center, Etty "Tika" Benveniste, Ph.D., is engaged in fundamental research that keeps UAB on the cutting-edge of cancer discoveries, and she has been leading this charge for nearly 30 years. It's quite an accomplishment considering she never wanted to move to Birmingham.

A native of Oakland, California, Dr. Benveniste received her bachelor's degree from California State University, Chico, and her Ph.D. in immunology at the University of California-Los Angeles. During her postdoctoral fellowship at UCLA, she met her husband, Cancer Center senior scientist Casey Morrow, Ph.D. An expert in the field of virology, Dr. Morrow suggested coming to UAB.

"UAB has always had a strong reputation in virology, so he said he wanted to go look," Dr. Benveniste recalls. "I said fine, but that I would not be moving to Birmingham, Alabama. With both of us being from California, it wasn't really on the radar."

A few visits convinced both Drs. Morrow and Benveniste to give Birmingham – and UAB – a chance. "Our original intent was not to stay more than five years," she says. "But the opportunities that arose for both of us at UAB were really wonderful."

Dr. Benveniste's research centers on neuroimmunology, the study of how the immune system communicates with the central nervous system. Specifically, her laboratory focuses on astrocytes, the most common type of cell within the central nervous system and the cell most often transformed into a brain tumor. Much of her work has been examining how the immune system and inflammation affect the growth of

glioblastomas, the most deadly type of brain tumor. She and her team are looking at inhibitors of specific tumor pathways to determine if they have therapeutic potential for treating glioblastomas.

Basic science – research conducted strictly in the laboratory – is often described as the cornerstone of cancer research, as every therapeutic agent starts in the lab. UAB and the Cancer Center have a national reputation as a leader in basic science, which is something Dr. Benveniste is particularly proud of.

"There are a number of examples at UAB of a finding that starts out as a basic science discovery and then evolves to importance, particularly in cancer," she says. "Through many years of hard work and investment, agents developed at UAB are now in clinical trials for several different cancers."

Dr. Benveniste gives much of the credit for this to the interactive network of scientists at UAB, and while she initially did not want to come to Birmingham all those years ago, she is happy she did and takes pride in her adopted hometown. "The Cancer Center is the crown jewel of UAB," she says. "There really is a lot of hope here within the Cancer Center and the School of Medicine. There is no doubt that UAB is the place to be."

"The Cancer Center is the crown jewel of UAB. There really is a lot of hope here within the Cancer Center and the School of Medicine. There is no doubt that UAB is the place to be."

Smita Bhatia, M.D., M.P.H.

Associate Director for Cancer
Outcomes and Survivorship
Professor of Pediatrics

Gay and Bew White Endowed Chair in Pediatric Oncology



GETTING TO THE NEXT LEVEL

An internationally renowned expert in cancer outcomes and survivorship research, Smita Bhatia, M.D., M.P.H., joined the Cancer Center in January 2015 after having spent 18 years at the City of Hope Comprehensive Cancer Center in Los Angeles. Dr. Bhatia's research focuses on cancer outcomes, with a special emphasis on the long-term health and well-being of survivors of all cancer types with the overarching goal of reducing the burden of morbidity among survivors.

One of Dr. Bhatia's passions, in addition to her research, is teaching and mentoring residents, fellows and junior faculty. She was actively involved in that role during her tenure at City of Hope, and since arriving at UAB, she has taken an even bigger role in this area. "It's fascinating to see junior faculty come in with a vague or undefined idea of a research question and walk them through steps to help them to that a-ha moment," she says. "That's what I want to see for all of my students, helping them go from one

level to the next."

While building her career, Dr. Bhatia and her husband were also raising two daughters, Devika and Shweta. Balancing her personal and professional life was often a challenge, but one that Dr. Bhatia was able to accept – after coming to an eventual realization. "I had to accept some level of chaos. I couldn't have everything under control," she says. "In the evenings or weekends, if the kids were awake, I did not work. I would wait until they went to bed, or I would get up very early in the morning to grab those few hours before they woke up.

"To make sure there are enough hours in the day, there's no time to procrastinate. Everything has to be done way in advance. Now that my daughters have grown up, I often ask them if they would rather have had me waiting with milk and cookies every day when they got home from school. They laugh and say, 'No, we never wanted that!'"

Learn more about
Dr. Bhatia in this issue's
Center Profile on page 15.

RISING STARS

The UAB Comprehensive Cancer Center is home to an outstanding and diverse faculty of more than 350 physicians and physician-scientists who work every day to eliminate cancer as a major public health problem. The women featured here are just a few of the "Rising Stars" who are leading the next generation of cancer research and treatment at the Cancer Center.

Read more about these dynamic scientists on the Cancer Center's blog by going to uab.edu/cancer.



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Mary-Ann Bjornsti, Ph.D

Associate Director for Translational Research
Professor and Chair, Department of Pharmacology and Toxicology
Newman H. Waters Chair of Clinical Pharmacology

BRIDGING OPPORTUNITIES

For Mary-Ann Bjornsti, Ph.D., each day is an opportunity to do what she loves – finding ways to bridge the gap between basic science research and clinical research to develop new and innovative ways to treat cancer.

Shortly after arriving at UAB from St. Jude Children's Research Hospital in 2009, Dr. Bjornsti was named the Cancer Center's inaugural associate director for translational research. As such, she works with faculty members throughout UAB to develop new and innovative ways to treat cancer, emphasizing the Cancer Center's strengths in translating scientific findings from the laboratory bench to the patient bedside.

Translational research has long been a passion of Dr. Bjornsti's, and one she has fostered throughout her career, which includes positions at the University of Minnesota, the University of Basel in Switzerland, Harvard University, Thomas Jefferson University in Philadelphia and a 10-year tenure at St. Jude. Much of her research focuses on methods of disrupting the function of the enzyme DNA topoisomerase I using the anti-tumor agent camptothecin. While the enzyme allows a tumor cell to unfold its DNA so that it can replicate, camptothecin traps the enzyme on the DNA to selectively kill cancer cells.

"Although we know the structure of camptothecin – how it physically interacts with the enzyme – we cannot predict which tumor will be responsive and which will not," Dr. Bjornsti says. "So we've been trying to understand that process using the yeast model system and then applying that information to human cells. If we can determine the relevant pathways, we can then use therapeutics to target those specific pathways or find new drug combinations to enhance the activity of camptothecin."

Dr. Bjornsti's work with camptothecin has led her to discover other cell pathways, such as the mTOR signaling pathway, that are critical in the development of certain types of breast cancer and could potentially have an impact in pancreatic

and ovarian cancers. This is the beauty of basic science, she says.

"What we're asking is if you alter the activity of this enzyme, can you get an increased sensitivity to cancer therapeutics? The answer is yes," she says. "This is a great example of going from a basic science finding, translating it into something that might be therapeutically meaningful, and then providing the rationale for drug development if there are no drugs currently available. A lot of what we do at the Cancer Center is try to understand what would be the next opportunity for developing novel therapeutics or drug combinations that would benefit human health."

During her time at St. Jude, Dr. Bjornsti also became interested in mentoring junior faculty, and she began looking for departmental chair positions at various places. UAB was one of them. She came to Birmingham for an interview and was immediately impressed. "I had never seen a large medical center so collaborative, where everybody was so interactive. This is a place where a great idea walks into the room, and everyone wants to know how to make that happen."

For Dr. Bjornsti, that spirit of collaboration – and inclusiveness – sets UAB apart from other places she's been in her career. "When I was younger, it would often be that I was the only female working in the laboratory. At faculty-level meetings, I might be the only female," she says. "At UAB, it's unusual for me to be the only female in the room, and that's the way it should be."

"The Cancer Center is spectacular. I love that all opinions are of value and all voices are heard. Everyone is encouraged to do what they do best, which is to focus on what drives them intellectually. There are so many wonderful stories of how we are pushing the envelope, and it's great to see the wealth of science across the enterprise here. That's really exciting."

"I had never seen a large medical center so collaborative, where everybody was so interactive.

This is a place where a great idea walks into the room, and everyone wants to know how to make that happen."

Wendy Demark-Wahnefried, Ph.D., R.D.
Associate Director for Cancer Prevention and Control
Professor, Nutrition Sciences
Webb Endowed Chair of Nutrition Sciences

FROM SURVIVOR TO SCIENTIST

Wendy Demark-Wahnefried, Ph.D., R.D., is not only one of the nation's leading experts in cancer prevention and control research. She is also a cancer survivor herself.

While working as an outpatient dietician and pursuing her doctorate at Syracuse University, Dr. Demark-Wahnefried was diagnosed at age 26 with a sarcoma – a “life-changing event,” she recalls. After undergoing surgery to remove one-third of her upper left leg and eventually receiving her Ph.D., she began building her career and accepted a position at Duke University.

It was at Duke where Dr. Demark-Wahnefried's cancer experience put her at a professional crossroads. She had the option of working as a ghostwriter for one professor or as a project manager for a cancer researcher. Though her personal history with cancer made the decision difficult, she chose the latter – and has never looked back.

“Having had a diagnosis of cancer, you're always waiting for the other shoe to drop,” she says. “It was hard for me to overcome, but now cancer is my life.”

Dr. Demark-Wahnefried's career has taken her from Duke to the M.D. Anderson Cancer Center to the UAB Comprehensive Cancer Center, which she joined in 2010. Her research has spanned basic science studies focused on determining mechanisms of action of food-related components on neoplastic progression to clinical research that involves nutrition-related concerns of cancer patients, as well as determining effective lifestyle interventions that improve the overall health of cancer survivors and their families. Her laboratory has conducted some of the largest studies exploring metabolic and body composition changes in response to cancer treatment. She has experienced particular success in the delivery of home-based lifestyle interventions among cancer

survivors, where she has led and continues to lead a number of National Institutes of Health-funded trials aimed at improving the diet and exercise behavioral of cancer survivors.

“Currently, most of my work is dedicated to the development and testing of interventions to improve the overall health and functioning of cancer survivors,” she says. “In addition, our laboratory is keenly interested in finding out how obesity drives more aggressive cancers and whether weight loss interventions can improve prognosis of certain cancers, most notably breast and prostate cancer.”

While her research keeps her extremely busy, Dr. Demark-Wahnefried also spends a great deal of time mentoring postdoctoral students and junior faculty members, who she says “will be the generation to solve the problem of cancer. That interaction with colleagues and the collaborative spirit at UAB are a tremendous motivation for Dr. Demark-Wahnefried to make a difference in the lives of cancer patients.

“There's a lot of good that can come out of a cancer diagnosis. It's a teachable moment that makes you sit back and say, ‘What do I want to do with my life?’” Dr. Demark-Wahnefried says. “UAB is a place where we can really make a difference in people's lives. That's what keeps me going.”



“There's a lot of good that can come out of a cancer diagnosis. It's a teachable moment that makes you sit back and say, ‘What do I want to do with my life?’”



Mona Fouad, M.D., M.P.H.

Senior Advisor to the Director

Professor and Director, Division of Preventive Medicine

Director, Minority Health and Health Disparities Research Center

OPENING DOORS, BREAKING THROUGH

Mona Fouad, M.D., M.P.H., has seen many changes during her nearly 25 years at UAB – especially for women.

“When I first started, there were very few women, even in leadership positions,” she says. “At one time, all the Cancer Center’s associate directors and program leaders were men. [Center director] Dr. [Albert] LoBuglio saw that lack of diversity in our leadership, and he asked if I would co-lead the cancer prevention and control program with Dr. [Ed] Partridge. Since my first grant was from the Cancer Center, I thought that was a great opportunity.”

Dr. Fouad began her career at UAB as a research fellow in the Division of Preventive Medicine, and today, she serves as director of that very division. Originally from Egypt, she came to the United States when her husband accepted a position in the UAB School of Engineering. Because she had always been more interested in prevention and wellness, one of Dr. Fouad’s first research projects focused on cardiovascular disease prevention among hourly workers in the city of Birmingham. Specifically, she was interested in high-risk populations such as firefighters, police officers, and street and sanitation employees.

“The police and firefighters led a very stressful life, so they had high rates of smoking and high blood pressure,” Dr. Fouad says. “The majority of the street and sanitation employees were African-Americans who had high rates of heart disease, smoking, diabetes and high blood pressure. They felt there was no importance or hope of how to manage their health. That’s how I became interested in minority populations and developing interventions to address these risk factors.”

Health disparities research was a young field at the time, but one that was growing, particularly for those interested in cancer. Dr. Fouad began developing programs tailored to cancer prevention and control, and her mentor suggested she meet with Dr. Partridge, who was working on similar research projects in that area. “I attended one of his community meetings and then knocked on his door with an idea for a grant. The rest is history,” Dr. Fouad recalls.

Over the years, Dr. Fouad and her team have built the Cancer Center’s prevention and control research program into a robust and dynamic enterprise that generates millions of dollars in grant funding annually for UAB. The program has expanded across Alabama and Mississippi, and now through the UAB Minority Health and Health Disparities Research Center (of which Dr. Fouad is the founding and current director), UAB is not only eliminating health disparities among minority populations, but also training the next generation of minority and diverse faculty.

“I’ve seen firsthand how diversity can lead to excellence,” Dr. Fouad says. “If you have a diverse group around the table, everyone brings their culture, opinions and experiences. That brings excellence to our research.”

Dr. Fouad also serves as senior associate dean of diversity and inclusion for the UAB School of Medicine, and as part of that, she is tasked with encouraging more women and diverse students to enter academic medicine. “Some women are reluctant to enter the field because they worry how they’ll manage their career and family life,” she says. “We are looking at ways to help women develop the skills and confidence to achieve their career goals and become leaders.”

Dr. Fouad recalls the sacrifices she herself made as a young mother raising two daughters while building a career. She spent many late nights working after putting her children to bed as well as bringing them to her office on the weekends. “You have to be organized and decide what your priorities are. You have to let some things go and accept that you cannot do everything by yourself,” she says.

“You have to have a passion for what you do. I love my work, and every day I’m excited by the day ahead. Women should not be discouraged by thinking ‘I can’t do it’ because there are ways to find support. If women don’t participate, no one will address their needs. Having women in leadership where they can have a voice is very enriching and can make UAB one of the excellent institutions both nationally and internationally. It’s fulfilling for me to give back, including to other women, and I appreciate that.”

“You have to have a passion for what you do. I love my work, and every day I’m excited by the day ahead. Women should not be discouraged by thinking ‘I can’t do it’ because there are ways to find support.”



BALANCING BETWEEN CONTINENTS

Isabel Scarinci, Ph.D., M.P.H., has overcome many challenges. From a childhood bout with polio to her efforts to help underserved populations, her life has been shaped by a fighting spirit.

“That’s the way to get me to do things – to say I can’t do it,” Dr. Scarinci says. “Someone once told me that the impossible just takes a little longer. So to accomplish the impossible is my motivation.”

Born and raised in Brazil, Dr. Scarinci grew up in a family of immigrants. Fluent in English, Portuguese and Spanish, she started college when she was only 16. After receiving a degree in psychology from the State University of Londrina, she left Brazil for the United States to get more training and then return to her home country to work with underserved populations.

“My mentor helped me to get a scholarship from the Brazilian government, and he found the best places in the world where I could get the training I was looking for,” she recalls. “One of those was UAB.”

Though she spoke limited English at the time, Dr. Scarinci came to UAB where she would receive her master’s degree in public health. After receiving her Ph.D. at Louisiana State University, she worked at the University of Memphis for four years before she was recruited back to UAB to expand the Cancer Center’s work in cancer disparities among underserved and racial/ethnic minority populations, particularly Latino immigrants.

Since returning to UAB, Dr. Scarinci has spearheaded a number of initiatives and programs aimed at eliminating health disparities in Latinos, both in the American South and in her home country of Brazil. One of those is “Sowing the Seeds of Health,” a program designed to promote breast and cervical cancer screening among Latina immigrants in Alabama using community

volunteers which has been continuously implemented for the past 12 years. She also has multiple projects in the United States and in Brazil to promote cancer screenings and tobacco control among underserved populations.

In 2014, Dr. Scarinci received two special honors. First, she was named as the UAB Comprehensive Cancer Center’s inaugural associate director for globalization and cancer to expand UAB’s global footprint in cancer research, and she was also appointed as Honorary Consul for Brazil to foster and promote relationships between the state of Alabama and Brazil. Her personal background combined with her professional experience made her an ideal fit for both positions and provides her with a unique opportunity – and challenge – that she loves.

“Not many people have the fortune to work with myriad underserved populations across the globe,” she says. “These individuals have enriched my life and given me the strength to continue our efforts toward a healthier and equitable world.”

“Not many people have the fortune to work with myriad underserved populations across the globe. These individuals have enriched my life and given me the strength to continue our efforts toward a healthier and equitable world.”

Photos courtesy of Children's of Alabama



Kaileb McIntyre

BRAIN TUMOR SURVIVOR

By KATHY BOWERS

When Kaileb McIntyre was born nearly 14 weeks before his due date in April 2012, his doctors expected that he would face many of the problems typical for premature babies.



"He weighed only 2 pounds, 2 ounces, and he had a lot of complications that came along with him being so small, so he had a tough time starting from when he was born," says his mother, Khalena McIntyre.

A routine scan to monitor Kaileb's development, however, revealed a suspicious area in his brain. Further testing indicated that he had a rapidly growing immature teratoma, or cancerous tumor. "When [the doctors] saw how much it had increased within just 24 hours, they were definitely alarmed, and they let me know they would be sending Kaileb to Children's Hospital," Mrs. McIntyre says.

Just a few days after Kaileb was transferred to Children's of Alabama, surgeons were able to remove 90 percent of his tumor. The remainder was treated with chemotherapy. A longstanding partner of the UAB Comprehensive Cancer Center, Children's of Alabama is the nation's third largest pediatric health care facility and treats 90 percent of the pediatric hematology-oncology patients in Alabama through its Alabama Center for Childhood Cancer and Blood Disorders, a partnership among Children's, the UAB Division of Pediatric Hematology-Oncology and the Cancer Center.

"Whenever we care for a child with a brain tumor, it takes an elaborate multidisciplinary team to provide the best care possible," says Alyssa Reddy, M.D., Kaileb's pediatric neuro-oncologist and a senior scientist at the Cancer Center. "We are fortunate

to have all the resources here to do this routinely, but Kaileb's case took us to a whole new level."

Every year in the United States, approximately 13,400 children between the ages of birth and 19 are diagnosed with cancer. Brain tumors are the most common form of solid tumors among children under the age of 15 and represent about 20 percent of all childhood cancers. According to the Pediatric Brain Tumor Foundation, an estimated 4,552 children and adolescents – approximately 13 each day – were diagnosed with a primary brain or central nervous system tumor in 2014.

While treating any type of brain tumor is difficult, treating pediatric brain tumors requires specific expertise as children's bodies behave much differently than adults because their bodies are still growing and developing. In Kaileb's case, his premature birth specifically presented a unique set of challenges.

"Here was this tiny baby who wasn't even supposed to be born yet, and the tumor was quickly growing," Dr. Reddy says. "Ideally, we would wait until the child was older, but something clearly had to be done. Neurosurgeon Dr. Jim Johnston performed an amazing tumor resection, and then our oncologists carefully provided over a year of intensive chemotherapy. It was incredibly rewarding to see Kaileb do so well, especially knowing we were able to combine our collective expertise in an uncharted situation."

Although Kaileb still experiences some medical problems related to his premature birth and the treatment for his tumor, his mother says he is "blossoming."

"In the beginning I really struggled, because I was concerned it was something that I had caused to happen, but as time went on I realized that God had a reason," Mrs. McIntyre says. "He allowed me to be sick so Kaileb would be born early and we could learn he had a rare tumor growing in his brain. If we had not caught it when we did, he might not be with us now because of how rapidly it was growing.

"He is a fighter," she says. "He has been through so many things, but he is always smiling and happy. He is a blessing and a miracle, and I never take that for granted."

**"He is a blessing
and a miracle,
and I never take
that for granted."**



Envisioning the Future: UAB's Advanced Imaging Facility Continues to Shine

By JOSH TILL and BEENA THANNICKAL

Since opening in 2013, the UAB Advanced Imaging Facility (AIF) has steadily grown into one of the most advanced and cutting-edge facilities not just in Alabama, but across the United States.

The AIF, located in the basement of the UAB Comprehensive Cancer Center's Wallace Tumor Institute, houses the most innovative, cutting-edge Positron Emission Tomography (PET) imaging equipment found in Alabama, which expands UAB's capability for both clinical and experimental PET. As part of the UAB Department of Radiology, the facility has two time-of-flight GE Discovery 710 PET/CT scanners and recently acquired a state-of-the-art PET/MR machine, which combines the capability of molecular imaging with PET and the high resolution of MR (magnetic resonance) imaging.

Weighing in at 18,000 pounds, the PET/MR is one of the first of its kind by GE installed in the United States. Along with the facility's other imaging equipment, it will play an important role in moving therapies and improved diagnostics more rapidly from the laboratory to the patient bedside in many research areas, including cancer, neuroscience and cardiology, says Janet Eary, M.D., director of the AIF and Cancer Center senior scientist. "While PET/CT is used for both clinical and research imaging, the PET/MR is used primarily for research. This positions UAB at the

forefront of patient care and research, improving our ability to diagnose and monitor treatment."

Unlike other imaging techniques, PET scans can provide unique cellular, biological and molecular information occurring in an organ or tissue and can provide a whole body assessment, ultimately helping to manage the disease in a more efficient, precise and accurate way. Specifically, PET can detect whether lesions are benign or malignant at their earliest stages. It can also verify suspected cancer reoccurrence, determine whether chemotherapy or other treatments are working as intended, and sometimes provide information that can help eliminate the need for surgical biopsy or unnecessary surgeries or treatments.

During a PET scan, a patient is injected with a small amount of a radiotracer that travels through the body and is utilized by the tissues or the organ being studied. The patient is then moved to one of the PET scanners, which contain an array of detectors that receive the energy emitted by the radiotracer. The system then processes that information and generates the images to be interpreted by specially trained UAB faculty.

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**The AIF houses the
most innovative,
cutting-edge
Positron Emission
Tomography
(PET) imaging
equipment found
in Alabama.**

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While the AIF's clinical operation features PET, the core of its research enterprise is the 61,000-pound cyclotron. The UAB TR24 cyclotron is a type of particle accelerator that moves protons — positively charged nuclear particles — along a circular path to strike a target, enabling researchers to make a variety of radiotracers or agents in quantities large enough to advance several clinical and research imaging efforts.

Because the cyclotron is on site, it enables UAB to produce numerous imaging agents labeled with short half-life radionuclides that are not commercially available to researchers because they must be produced and used locally. From a research perspective, detailed investigations can be conducted in a variety of interdisciplinary ways to probe the biology of living organisms. Working in conjunction with the PET imaging equipment, the cyclotron enables researchers to evaluate cancer treatment effects and assess changes in tumor pathologic parameters in real time.

"For example, our laboratory has been making Fluorine 18, which is a radioisotope used to label

imaging agents for PET," Dr. Eary says. "We recently began making a second radioisotope, Carbon 11, which is strictly a research radioisotope for new PET imaging agents and has a very short half-life of about 20 minutes. We are using these new imaging agents in research clinical protocols, which is very exciting."

Half-life is defined as however long it takes for half of the radioisotope to decay away. Carbon 11's half-life of 20 minutes is considered fairly fast, which makes it useful for research protocols. "The proximity of our cyclotron to the PET/CT imaging devices is significant because of this," Dr. Eary says. "While other medical centers may find it nearly impossible to use radioactive tracers with a half-life of 20 minutes, we're able to make that a reality."

Dr. Eary anticipates that the AIF will begin making other radioisotopes later this fall and will also soon begin launching research protocols on the new PET/MR machine. While there are currently no plans to add more equipment, she and her team have recruited several faculty members to round out the facility's staff.

"The Advanced Imaging Facility is a center of focus for development and innovation and will continue to grow and serve the needs of our basic science, translational and clinical research communities," Dr. Eary says. "Once it is up and running at its full capacity, the UAB facility will rapidly take its place as a leader in molecular imaging and innovation."

"The Advanced Imaging Facility is a center of focus for development and innovation and will continue to grow and serve the needs of our basic science, translational and clinical research communities."

*Janet Eary, M.D., director of the AIF
and Cancer Center senior scientist*



Smita Bhatia, M.D., M.P.H.

UAB Comprehensive Cancer Center Magazine salutes Smita Bhatia, M.D., M.P.H., professor of pediatrics, vice chair for outcomes research in the UAB Department of Pediatrics, director of the Institute for Cancer Outcomes and Survivorship, and associate director for outcomes research at the UAB Comprehensive Cancer Center. She also holds the Gay and Bew White Endowed Chair in Pediatric Oncology. Dr. Bhatia is internationally renowned for her work in cancer survivorship research and has received numerous awards and honors during her career. She and her husband Ravi Bhatia, M.D., have two daughters, Devika and Shweta, and make their home in Mountain Brook.

By JOSH TILL

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Dr. Bhatia is working closely with the Cancer Center and Children's of Alabama to establish a multidisciplinary program in cancer outcomes research.

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As a child growing up in India, Smita Bhatia, M.D., M.P.H., developed an interest in medicine at an early age. That interest, particularly in oncology, was sparked by the death of the son of her father's colleague from a bone tumor when Dr. Bhatia was just seven years old.

Her interest in medicine never waned, and Dr. Bhatia would go on to attend the renowned All India Institute of Medical Sciences in New Delhi where she received her medical degree. While there, she also discovered the field that would define much of her career – pediatrics.

"As I was pursuing my medical degree, I discovered my love for children," Dr. Bhatia says. "Children are relatively uncomplicated. Their attitude toward life is simple and fresh. I really enjoy that."

Dr. Bhatia's interest in both pediatrics and cancer led her to choosing pediatric oncology as her specialty moving forward in her post-graduate career. Medical school also introduced her to her husband of nearly 30 years, Ravi Bhatia, M.D., who was also studying to become a doctor. The two shared a class together, and as Dr. Ravi Bhatia recalls, they "met around the dissection table." The pair married and Dr. Bhatia gave birth to the first of their two daughters while still in India. The Bhatias' lives were just beginning, but bigger things would soon be calling.

A Culture Shock

One of those bigger things was the United States. In 1989, Dr. Ravi Bhatia applied for and accepted a fellowship position in hematology-oncology at the University of Minnesota. It was a great opportunity, and the Bhatias made the decision to make the nearly 8,000-mile move from India to Minneapolis. Going from India to the American Midwest was a challenge for Dr. Bhatia.

"It was a huge culture shock," she recalls. "Just the little things, like driving on the 'wrong' side of the road and using the ATM, to weathering the Minnesota winter, which was quite hard in the beginning. But we were young, and it was an adventure."

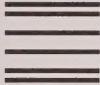
While her husband continued his training, Dr. Bhatia waited until their new home life was more established before joining the workforce herself. She, too, would eventually join the faculty at the University of Minnesota, where she completed a fellowship in pediatric hematology-oncology and bone marrow transplant. The Bhatias finished their training and joined the faculty at Minnesota, but after seven years, the time came for another move – from the heavy snow of Minnesota to the sunny skies of California.

"We wanted an institution that offered challenging positions for both of us, and we found that at City of Hope in Los Angeles," says Dr. Bhatia, who joined the faculty there in 1996 as an assistant professor of pediatric hematology-oncology. Both Drs. Bhatia would rise through the ranks at City of Hope, with Dr. Smita Bhatia eventually becoming a professor and chair of the Department of Population Sciences, which she established, as well as co-leader of the Cancer Control and Population Sciences Program. While there, she made significant scientific contributions toward identifying chronic health issues among cancer survivors. She established multidisciplinary survivorship clinics, providing cancer survivors with state-of-the-art comprehensive follow-up care. She also served as the associate chair for the Children's Oncology Group, coordinating survivorship research across 200 pediatric oncology institutions, and in 2006, she was elected to membership in the American Society for Clinical Investigation in recognition of meritorious and outstanding contributions as a physician-scientist.

New Opportunities

After 18 years, and raising their two children, the Bhatias felt that the time had come for them to leave City of Hope to pursue other opportunities. "Because we had been at a free-standing cancer center for so long, we were missing the teaching component of an academic medical center," Dr. Bhatia says.

That feeling drove the Bhatias to explore opportunities in the university setting, which eventually led them to UAB where they were



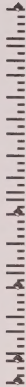
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recruited by UAB Comprehensive Cancer Center director Ed Partridge, M.D., among several other UAB officials. After several visits, both Drs. Bhatia were successfully recruited to the Cancer Center, with their appointments effective January 1, 2015. While Dr. Ravi Bhatia serves as director of the UAB Division of Hematology-Oncology and deputy director of the Cancer Center, Dr. Smita Bhatia serves in the newly created position of associate director of outcomes research for the Cancer Center. She also holds new positions as director of the Institute for Cancer Outcomes and Survivorship in the UAB School of Medicine and vice chair for outcomes in the Department of Pediatrics.

As such, Dr. Bhatia is working closely with the Cancer Center and Children's of Alabama to establish a multidisciplinary program in cancer outcomes research, much like she did at City of Hope. Her goal, she says, is to create the world's best cancer outcome center at UAB by bringing together specialists from multiple disciplines in both pediatric and adult medicine into one team with the common goal of improving cancer outcomes.

Dr. Bhatia defines cancer outcomes as a measurable entity that shows how well one is performing with that particular disease. For example, outcomes in childhood leukemia would show the survival rate for children who have been diagnosed with leukemia after one, five or 10 years of treatment. Outcomes research also explores how the short- and long-term health of cancer survivors compares to those with normal health backgrounds.

That type of research was the driving force behind the Taking on Life after Cancer (TLC) Clinic, established by UAB and Children's in 2006, which sees patients after they have completed treatments to educate them about the long-term risks associated with their therapies. Dr. Bhatia is taking an active role with the TLC Clinic and hopes to expand it even further.

"Rather than seeing cancer survivors only once after treatment, we want to bring them back on an annual basis for life to monitor them for long-term consequences," Dr. Bhatia says. "We hope to understand the chronic health conditions experienced through the entire lifespan of cancer survivors. I would want to identify those survivors at the highest risk for morbidity, so that we can institute targeted interventions."

Looking Ahead

Since officially joining the UAB faculty in January, Dr. Bhatia's first year has been a whirlwind of activity – transitioning research protocols from City of Hope to UAB, initiating new research studies, launching a clinical practice, recruiting new faculty, and meetings – lots of meetings.

"There are very few days where I don't have wall-to-wall meetings," she says. "I'm trying to be more disciplined so I can at least devote the mornings to my own writing and research and then spend the rest of the day with meetings."

In what little spare time she does have, Dr. Bhatia enjoys knitting, which she finds calming and something she can do while reading or watching television. She says that she does try to take a break to read or watch television every night. "I'm not a binge watcher because I can't indulge in endless hours of TV watching, but I like to have the whole season of something waiting for me rather than having to wait every week for the next episode," she says.

So far, Dr. Bhatia is enjoying her new life in Birmingham and sees great things ahead. "It's been a beautiful transition – just amazing," she says. "There hasn't been a single day where I've woken up and thought 'What have I done?' Everyone has been extremely helpful and welcoming. It's been very energizing, and I'm looking forward to a bright future here at UAB."

"It's been very energizing, and I'm looking forward to a bright future here at UAB."



UAB Study Shows Dramatic Cost Savings for Cancer Patients

By BEENA
THANNICKAL

UAB recently presented an observational study at this year's annual American Society of Clinical Oncology meeting in Chicago that indicates a more rapid decline in Medicare costs and patient resource utilization during implementation of a lay navigation program.

In 2012, the UAB Comprehensive Cancer Center created the Patient Care Connect Program, a lay patient navigation initiative with the support of a \$15-million Health Care Innovation Challenge Grant Award from the Centers for Medicare and Medicaid Innovation with the aim of achieving better health and better health care at a lower cost.

Based on the premise that coordinated cancer management leads to decreased overall cost, the Patient Care Connect Program is designed to pair a trained non-clinical lay navigator with a cancer patient to help them through their cancer journey.

"The goals of the program are to reduce unnecessary emergency room visits and inpatient intensive care unit days, encourage evidence-based clinical pathways, adopt earlier use of hospice care, reduce use of chemotherapy in the last two weeks of life, and provide the highest quality of life for people diagnosed with cancer," says Edward Partridge, M.D., director of the Cancer Center and principal investigator of the study.

The Patient Care Connect Program has about 40 lay navigators who work across 12 UAB Health System Cancer Community Network associate sites located in Alabama, Florida, Georgia, Mississippi and Tennessee.

"Our trained navigators help address the barriers patients often have with identifying resources for their care and empower them to recognize clinical symptoms, become more knowledgeable about their disease and treatment, and when necessary, engage in end-of-life discussion with their providers," says Gabrielle Rocque, M.D., assistant professor in the UAB Division of Hematology and Oncology and medical director of the Patient Care Connect Program.

For this study, UAB examined 30,589 Medicare patients (age 65 and older) receiving cancer care across the network from January 1, 2012, through December 31, 2014. Lay navigation started in March 2013. By the end of 2014 about 25 percent of eligible Medicare patients were navigated.

The study evaluated health care utilization with hospitalizations, ER visits, ICU admissions and hospice admissions for all eligible Medicare patients. In addition, during implementation, the study analyzed the cost to Medicare for the overall medical care received by these patients. The results of the study indicate a dramatic trend toward a clinically

significant reduction in health care utilization and Medicare costs, with substantial impact during initial phase, survivorship and the last six months of life. Specific results during the PCCP implementation include:

- Hospitalization rates dropped significantly from 35.8 percent to 16.1 percent in the navigated patient population, in comparison to the non-navigated group that only changed from 10.8 percent to 7.5 percent.
- ER visits decreased from 30.7 percent to 21.8 percent in the navigated patient population, in comparison to the non-navigated group that only changed from 14.6 percent to 13.7 percent.
- With ICU admissions, a dramatic reduction occurred from 10 percent to 4 percent in the navigated patient population, in comparison to the non-navigated group that only changed from 2.5 percent to 1.7 percent.
- In terms of Medicare claims, there was a considerable reduction of overall cost in the navigated patient population from \$15,091 to \$8,269 per patient per quarter, which is a Medicare savings of \$6,822 per navigated patient.
- Cost in the last six months of life decreased from \$23,735 to \$16,764 per patient for the navigated patient population, in comparison to the non-navigated group that increased from \$13,418 to \$15,544.

"Certainly this study has its limitations in that some of these trends cannot be fully attributed to the Patient Care Connect Program," Dr. Rocque says. "This was a non-randomized observational study with a lack of comparison data. Lower utilization and Medicare costs may be multifactorial based upon patient navigation, health system improvement and a number of national and local influences."

However, according to Dr. Rocque, "Lay navigators have the potential to identify patient needs, communicate with the care team, and contribute to better care and lower health care costs."

With the greatest cost reduction in the last six months of life, Dr. Partridge stresses the need for improved end-of-life care. "Physicians and patients will need to make informed decisions concerning the use of hospice care for advanced illness and eliminate the use of ineffective chemotherapy treatments in the advanced stages of disease," he says.

As the demand to curb health care cost increases, says Dr. Partridge: "There is a need for innovative approaches like this to improve patient care across the cancer continuum."

Based on the premise that coordinated cancer management leads to decreased overall cost, the Patient Care Connect Program is designed to pair a trained non-clinical lay navigator with a cancer patient to help them through their cancer journey.



Evolution of the CHAs

DEEP SOUTH NETWORK CELEBRATES 15 YEARS

By JOSH TILL

The UAB Comprehensive Cancer Center has long been recognized as a community outreach leader for its work in eliminating cancer health disparities among minority and underserved populations on local, national and even international levels.

The disparate rate of cancer mortality for African-Americans compared to Caucasians spurred the creation of the Cancer Center's flagship outreach program – the Deep South Network for Cancer Control (DSN), which recently celebrated its 15th year of funding.

Originally funded by the National Cancer Institute (NCI) in 2000, the DSN was designed to build a community infrastructure to eliminate health disparities by increasing cancer awareness and screening rates among minorities and underserved populations. Since its inception, the network has targeted two poor rural regions – the Alabama Black Belt and the Mississippi Delta – and two urban areas – Alabama's Jefferson County and Mississippi's Hattiesburg/Laurel Metro.

Initially focusing on breast and cervical cancers, DSN relied on a novel strategy to spread its messages about prevention and early detection. It identified “natural helpers” – the trusted members of each community, ranging from school teachers to factory workers to hairstylists – and trained them as community health advisors (CHAs) to educate their families, friends and neighbors about cancer.

DSN eventually took the CHA model a step further and trained these volunteers as CHARPs – Community Health Advisors Trained as Research Partners. In 15 years, the DSN staff has trained more than 1,500 people throughout Alabama and Mississippi as CHARPs, and those CHARPs have been extremely effective. Among the Medicare/Medicaid population in DSN's targeted areas, the disparity in mammography screening rates has decreased from 17 percent to .25 percent, thanks in large part to the efforts of the CHARPs.

“Community outreach and education is the cornerstone and foundation of the Deep South Network,” says Claudia Hardy, M.P.A., program



Claudia Hardy, M.P.A.

director of the DSN. “For example, in the last 15 years, we’ve seen several changes in screening guidelines for certain cancers, such as cervical cancer, and we have been able to successfully take that information and keep the CHARPs informed and trained to convey those messages to their communities. That’s really the first love of our CHARPs.”

For many citizens in the DSN's targeted regions, the biggest concerns are education and access. The first step in educating the medically underserved is to teach them that cancer screenings are effective and worthwhile. The other issue involved is access to care. Once the patient decides to have a screening, he or she is then faced with the dilemma of where to have the test and how to get there. If diagnosed with cancer, these patients often have to drive 50 or 60 miles for treatment.

This is where a CHARP is able to help, as they understand these problems and are trusted by the men and women they serve. Because of that, they are able

The disparate rate of cancer mortality for African-Americans compared to Caucasians spurred the creation of the Cancer Center's flagship outreach program – the Deep South Network for Cancer Control (DSN), which recently celebrated its 15th year of funding.

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to help patients overcome many of these issues and better navigate the cancer journey.

A perfect example of this is Angela Williams, who first became a CHARP in 2001 after losing her sister to ovarian cancer. "For several months, I facilitated my grief and fears in unhealthy ways," she recalls. "But after volunteering with the Deep South Network, my grief changed to graduation as a community health advisor."

In addition to serving as a CHARP, Ms. Williams also works as a patient navigator for the UAB Division of Preventive Medicine. "My training and expertise as a CHA play a key role in my success as a patient navigator for all cancer types," she says. "As such, I link patients to community resources, help patients overcome barriers to treatment, support patients on clinical trials, and provide social and emotional support from diagnosis to survivorship."

The Future of the Deep South Network

So where do the CHAs – and the Deep South Network – go from here? There are challenges ahead. Federal funding for cancer research has decreased nationwide, and programs such as the DSN are being affected. While additional funding sources are being secured, the NCI has granted the Cancer Center an additional year of funding to disseminate their findings and reflect on what has been done while examining what still needs to be accomplished.

"This is a time for us to celebrate our successes and accomplishments," Ms. Hardy says. "It also allows us to do a full analysis of the massive amounts of data we have collected over the years."

The DSN has conducted literally thousands of cancer awareness activities that have reached hundreds of thousands of people. While the network mostly focused on breast and cervical cancer screenings in its early days, it expanded over the years to include

colorectal cancer. In the last eight years, DSN also began heavily targeting physical activity and lifestyle choices among African-Americans in its targeted areas. For example, the Body & Soul initiative, the WALK Campaign and the Journey to Better Weight Loss research intervention are all programs designed to address the lack of physical activity and poor eating habits among minorities and other underserved populations.

Ms. Hardy recognizes, however, that there is still plenty of work to be done. "While we have been successful in reversing disparities in mammography rates among the Medicare population, we still have 40 percent of the populations who are unscreened. These are educated people with insurance and the means necessary to get screened, but don't for a number of reasons. We have to be innovative and push ourselves outside our comfort zones to reach these people."

For the next year, the CHARPs are being mobilized to go back into their communities and update them on what the DSN has accomplished and gain feedback on potential activities and initiatives going forward. Ms. Hardy hopes to expand the CHA model to include HIV and hepatitis-C awareness and education along with other chronic diseases that have a cancer connection, in addition to conducting more community-based participatory research and collaborating with other Cancer Center scientists.

"One of the things I'm most proud of is the paradigm shift in people's willingness to talk about cancer," she says. "When we first started, we had to really beat the bushes to seek out people and programs, and we no longer have to do that. People come to us now. It's been a labor of love, and I wouldn't take anything for the role I have had in this journey. We're excited about the future and what the next chapter will bring."

The DSN has conducted literally thousands of cancer awareness activities that have reached hundreds of thousands of people.

Advisory Board Names New Members, Officers

By JOSH TILL



L to R: Robert Moore, Laura McDonald, Lisa Harris, Cathy Watson, Lois Bankston, Andrew Case (Not pictured: George Buchanan)

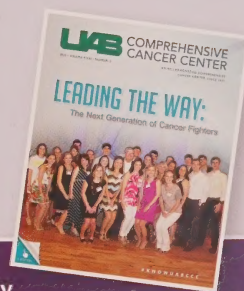
The Advisory Board of the UAB Comprehensive Cancer Center recently elected new members and its officer slate for the 2015-16 year.

Serving as the Advisory Board's new president is Joel Welker, president and publisher of the *Birmingham Business Journal*. Rick Swagler, executive vice president of external affairs at Regions Financial, is president-elect I, and Mitzi Davis, a community volunteer, is president-elect II.

New members elected to the board are: Lois Bankston, a Birmingham floral and special events designer; George Buchanan, executive vice president of credit risk management at Regions Financial; Andrew Case, director of asset management at Harbert Management Corporation; Lisa Harris, director of client services at O2 Ideas; Laura McDonald, vice president at Protective Life;

Robert Moore, vice president of commercial banking at BBVA Compass; and Cathy Watson, owner of Tribeca LLC.

The Advisory Board is a volunteer group of community leaders, most touched by cancer in some way, who raise funds to foster research, provide patient amenities and increase awareness of the Cancer Center. Since its inception in 1984, the board has raised more than \$14 million for the center.



The Young Supporters Board also recently named its 2015-16 officers and new members. Read about them in the latest e-edition of UAB Comprehensive Cancer Center Magazine by visiting www.uab.edu/cancer.



Vicki Denaburg

VOLUNTEER PROFILE

By HILARY MEARES

Birmingham artist Vicki Denaburg does not know why she agreed to participate in the first ArtBLINK Gala in February 2008. She had only been painting a few years, and she was extremely nervous to paint in front of an audience who would be bidding on her art right in front of her eyes. “The other artists were such big names,” Mrs. Denaburg says. “I wasn’t even close to their league.”

But, for some reason, she could not say no. So Mrs. Denaburg joined 10 other local artists to participate in the UAB Comprehensive Cancer Center’s first ArtBLINK Gala, in which each artist had 90 minutes to create a piece of art that would then be auctioned off to raise money for cancer research. At the time, Mrs. Denaburg did not have a personal cancer connection that drew her to the event. “I participated because every day people are supposed to find opportunities to help people, and I knew this was a wonderful cause,” she recalls.

Leading up to the event, Mrs. Denaburg, a former make-up artist, practiced for weeks and weeks. “I was so nervous about being embarrassed that my sweet husband prepared my father-in-law to buy my painting just in case no one wanted it,” she says. But when her painting was ready to be auctioned off, paddles shot up in the air. Her painting sold for \$4,000 that day, and needless to say, her father-in-law didn’t have to buy it.

In the following years, ArtBLINK has grown into one of Birmingham’s most popular and unique events, and it is something Mrs. Denaburg looks forward to

each year. She has become one of the more involved ArtBLINK artists, having participated every year and serving as a leader on the event’s planning committee. A unique aspect of ArtBLINK is that guests can watch and interact with the artists as they work, and Mrs. Denaburg – typically dressed in a beautiful gown – is always popular with guests. “My favorite part of the Gala is when people stop me to talk while I paint. People always make fun of me because I love to dress up, and I always buy a new dress to paint in,” she says. “They always ask me if I’m afraid to ruin it while I paint. Of course not! That’s why I buy them.”

Like so many people, cancer eventually affected Mrs. Denaburg personally. In 2013, she lost her mother-in-law to cancer, and her sister-in-law in May 2015. Her father recently survived a battle with cancer and is now cancer-free. “Maybe this is why I was led so early on to participate,” she says. “God told me to say yes to the event for this reason, and now my story hits closer to home.”

Mrs. Denaburg had always planned on participating in the event for as long as the Cancer Center hosts it, but now she has personal experience she will bring with her. She painted in honor of her mother-in-law in 2014, and she plans on painting in honor of her father and sister-in-law at this year’s event. “I feel blessed and humbled to be able to be a part of this event,” she says. “If I can do anything to help other families have a less difficult time, and if I can help the Cancer Center get closer to finding cures, then I will.”

“I participated because every day people are supposed to find opportunities to help people, and I knew this was a wonderful cause.”

NIH Awards Nearly \$34 Million to UAB Center for Clinical and Translational Science



Center for Clinical and Translational Science

The National Institutes of Health has awarded the UAB Center for Clinical and Translational Science (CCTS) \$33.59 million over four years to continue the center's programs advancing translational research.

Since its initial funding in 2008 through Alabama's only Center for Translational Science Award to work toward innovative discoveries for better health, the CCTS has nurtured UAB research, accelerating the process of translating laboratory discoveries into treatments for patients, training a new generation of clinical and translational researchers, and engaging communities in clinical research efforts.

"We are excited by the capacity to continue to enhance our institution's and our region's innovative research and medical care," says Robert Kimberly, M.D., director of the CCTS and UAB Comprehensive Cancer Center senior scientist. "Through internal and external partnerships, as well as a robust clinical environment and cutting-edge informatics and clinical trial resources, we look forward to working with our patients over the course of their lifespan."

The amount of this award, more than double its previous funding and one of the largest at UAB, reflects an unmatched enthusiasm for the CCTS and its affiliated programs. It includes funding for 10 annual pre-doctoral training awards, 10 summer training award, and eight career development awards for senior postdoctoral fellows or faculty-level candidates.

"Our training programs continue to foster a culture of responsible, ethical practice among students, faculty and clinicians conducting human subjects research," Dr. Kimberly says. "The NIH's support of our expansive partner network, encompassing 11 regional academic and medical institutions throughout Alabama, Louisiana and Mississippi, will allow us to further grow our scope of practices and research resources as we look to tackle health disparities in the Southeast."

"UAB is fully committed to the goals of the CCTS and to its continued development as a hub for clinical and translational research in the Southeast," says UAB President Ray L. Watts, M.D. "This significant renewal speaks to the tremendous work and vision of our CCTS leadership and team, as well as our clinical infrastructure, scientific strengths, informatics expertise, training programs, and biostatistical and research design assistance. The CCTS touches researchers in all UAB schools and across the partner network, and we are thrilled that this important work will continue with the confidence and support of the NIH."

UAB Cancer Center Named to List of Great Oncology Programs

Becker's Hospital Review has named the UAB Comprehensive Cancer Center as one of the nation's "100 Hospitals and Health Systems with Great Oncology Programs."

The Cancer Center, the only one listed from the state of Alabama, was selected for the 2015 list as an organization dedicated to treating cancer patients as well as researching the deadly disease. It was recognized for its clinical outcomes, multidisciplinary care teams, clinical expertise and oncology research. The Cancer Center was also noted for its influential cancer education and prevention efforts.

Becker's Hospital Review is a monthly publication offering up-to-date business and legal news and analysis relating to hospitals and health systems. It also publishes a number of lists of outstanding facilities and individuals throughout the year.

Hospitals were selected for inclusion on this list based on a number of factors, including recognition received, accreditations earned and cancer-oriented group memberships held. Specifically, the Becker's editorial team examined *U.S. News & World Report* cancer care rankings, CareChex cancer care rankings, BlueCross BlueShield Association Blue Distinction Center designation, National Cancer Institute designations, Commission on Cancer accreditations, awards and National Comprehensive Cancer Network membership.



UAB Study Finds Possible Frontline Therapy for Older Patients with Hodgkin's Lymphoma

A new UAB study reports that brentuximab vedotin is an effective and safe first course of treatment for older patients with Hodgkin's lymphoma that cannot be treated with conventional combination chemotherapy. Results of the study, led by UAB Comprehensive Cancer Center senior scientist Andres Forero, M.D., were published online last month in the journal *Blood*.

While standard chemotherapy can achieve complete remissions and cures in younger patients with Hodgkin's lymphoma, the majority of those 60 and older are either ineligible because of other serious medical conditions or refuse treatment in order to avoid complications related to drug toxicity.

"The biology in older patients may differ from that of younger patients," Dr. Forero says. "Additionally, the presence of other illnesses, particularly cardiac dysfunction, may limit administration of standard regimens. It became clear to us that, as the rate of remission is much lower for older compared to younger Hodgkin's lymphoma patients, there is a clear need for less toxic treatments that allow patients 60 and older to complete their full regimen without complications or interruptions."

The Cancer Center and Dr. Forero have a long history of developing promising therapies for lymphoma and of working with drugs like brentuximab vedotin, a therapy that targets Hodgkin's lymphoma cells and delivers a potent dose of chemotherapy without harming healthy cells. In previous studies, brentuximab vedotin has been shown to achieve remissions in patients with relapsed or treatment-resistant disease.

Dr. Forero and his team evaluated 26 patients, ages 64-92, who were ineligible for conventional chemotherapy or declined treatment after receiving information about its risks. Researchers administered a dose of intravenous brentuximab vedotin treatment every three weeks for up to 16 doses. Those who benefited from the drug could continue beyond this time period until disease progression, unacceptable toxicity or study closure. Patients received a median of eight cycles, with four completing 16 and one completing 23 cycles.

At the time of analysis, 92 percent of patients achieved a complete or partial response to the drug that lasted about 9.1 months. Of those, 73 percent achieved a complete remission that lasted about 9.2 months. The treatment was generally well-tolerated and consistent with previous reports of brentuximab vedotin in patients with relapsed and treatment-resistant Hodgkin's lymphoma.

"While we observed promising responses, the next step is to evaluate this drug in combination with additional chemotherapy or immunotherapies that might allow us to prolong the response without relapse," Dr. Forero says.



Andres Forero, M.D.

Latest in Prostate Cancer Detection Results in Fewer Unnecessary Biopsies

The National Cancer Institute says more than 24,500 men in the United States will die from prostate cancer in 2015. UAB's Program for Personalized Prostate Cancer Care is taking aim at that statistic by becoming the first in the region to offer the latest prostate cancer detection technology.

In 2014, the PPPCC was the first in the Southeast to offer magnetic resonance imaging and ultrasound fusion-guided biopsy, an imaging technique that can detect prostate cancer with higher accuracy. Now the program is extending its reach beyond advanced imaging into advanced diagnostic testing by being the first in the region to offer the Prostate Health Index (phi) from PCLS, an FDA-approved blood test shown to be three times more specific than the prostate-specific antigen, or PSA, test.

"The improved specificity for identifying prostate cancer from phi further enhances patient care as compared to the traditional, more widely used PSA test," says Soroush Rais-Bahrami, M.D., assistant professor in the UAB Department of Urology and Cancer Center associate scientist. "The test results offer a report that is personalized for each patient."

The difference between the PSA test and the phi is the latter can give the patient an exact percentage chance of having prostate cancer, while the PSA test just gives an amount of PSA levels in the blood, which can be affected by factors such as prostate enlargement, a urinary tract infection or prostatitis, and can lead to unnecessary prostate biopsies.

UAB currently has the only physicians offering phi from PCLS in Alabama, Mississippi, Tennessee and the Florida panhandle.



Soroush Rais-Bahrami, M.D.

Novel Research Shows Social Factors May Impact Younger Leukemia Patients' Survival

A recent UAB study reveals that insurance status, marital status and county-level income may affect the chances of survival in young patients with acute myeloid leukemia. The findings, published online in the journal *Cancer*, indicate that additional efforts and resources are needed to address the social factors that impact critical aspects of health in these patients.

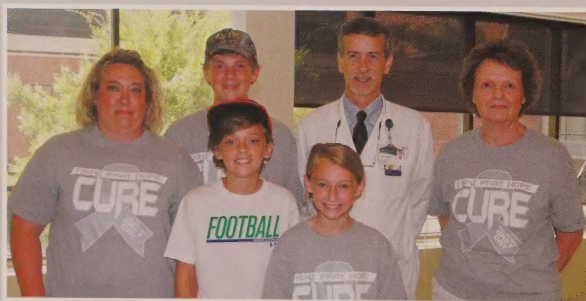
"A cure is possible mostly for younger patients, but treatment is intense, often requiring a bone marrow transplant and using a lot of resources from the health care system, patients and families," says Luciano Jose Costa, M.D., Ph.D., associate professor in the UAB Division of Hematology and Oncology. "We have made tremendous progress in understanding the biology of AML. But we need to pay the same attention to resources available to our patients as this greatly impacts their chances to survive their leukemia."

Investigators at UAB analyzed a database with 5,541 patients younger than the age of 65 to demonstrate that, in addition to age and disease characteristics, other "non-biological" patient characteristics matter in having a higher or lower chance of cure.

The research showed that patients who were single or divorced, patients who were uninsured or were Medicaid beneficiaries, and patients who lived in areas with lower income had substantially higher risk of death.

"We believe these three factors indicate lack of material and social support preventing young patients from successfully walking the long and difficult road toward cure," says Uma Borate, M.D., assistant professor in the UAB Division of Hematology and Oncology and lead author of the study.

Drs. Costa and Borate, also scientists at the UAB Comprehensive Cancer Center, suggest that the findings show these factors, that are not necessarily related to care, can have significant impacts on AML patients' outcomes. The UAB study is the largest to date to look at socioeconomic factors in outcomes of younger patients with AML.



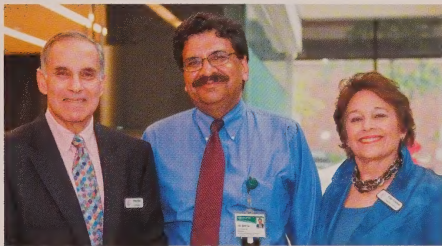
Pictured, left to right: Brandi Keller, Jarrett Keller, Jaden Keller, Jaley Keller, Brenda Keller and Cancer Center neuro-oncologist Burt Nabors, M.D.

Local Family Makes Donation

The Keller family of Scottsboro recently hosted a community festival to raise money for brain tumor research, after father and husband Anthony Keller passed away from the disease. Recently, the family visited the UAB Comprehensive Cancer Center to present their donation of \$7,000, all of which will go toward the Cancer Center's internationally renowned neuro-oncology research program.

BCRFA Hosts Endowment Reception

In June, the Breast Cancer Research Foundation of Alabama announced that it had raised enough money to fund the O'Neal-Sokol Breast Cancer Research Foundation of Alabama Endowed Chair, which will be held by renowned breast cancer specialist Andres Forero, M.D. The BCRFA hosted a reception at the UAB Comprehensive Cancer Center to celebrate this achievement, which honors BCRFA co-founders Dolly O'Neal and Bruce Sokol as well as the foundation for all its accomplishments in the fight against breast cancer.



PATIENT AND FAMILY RESOURCE CENTER

The UAB Comprehensive Cancer Center's Patient & Family Resource Center provides a comfortable place to find support. If you or a loved one has been diagnosed with cancer, our staff can answer your questions about the illness, treatment options and available support services.

This can include:

- Cancer Prevention
- Dealing with Side Effects
- Clinical Trials
- Complementary Therapies
- Stress Management
- Spirituality
- Support Groups & One-on-One Support
- Mindful Meditation
- Restorative Yoga
- Art Therapy

PATIENT & FAMILY RESOURCE CENTER

Wallace Tumor Institute,
Room 220

For more information, contact

Teri Hoenemeyer,
(205) 934-5772
tgw318@uab.edu

Inaugural Cycliad a Success

The Cancer Center recently celebrated the success of its inaugural Cycliad event, which raised \$409,000 for the center. Held over four weekends during spring 2015, Cycliad was a 1,300-mile bicycle challenge aimed at raising funds to support the patients and programs of the UAB Cancer Community Network, and the Patient Care Connect patient navigation program. The ride covered four states, culminating in a community event at Railroad Park in downtown Birmingham.

Plans are underway for Cycliad 2016 – visit cycliad.org to learn more!





Cancer Center Delegation Visits Egypt

In June, a team of representatives from the UAB Comprehensive Cancer Center traveled to Alexandria, Egypt, as part of the Globalization and Cancer Initiative, in partnership with Alexandria Regional Centre for Women's Health and Development. The Cancer Center's globalization initiative was launched in 2014 with the goal of facilitating the expansion of existing international partnerships and developing new global relationships associated with cancer health disparities.



Metro Sertoma Makes Annual Donation

Birmingham's Metro Sertoma Club recently made its annual contribution to the UAB Comprehensive Cancer Center. This year's donation of \$5,000 continues Metro Sertoma's longstanding tradition of supporting cutting-edge research at the Cancer Center. Pictured here is Steve Scorey presenting the check to Janet Eary, M.D., professor of radiology and Cancer Center senior scientist.

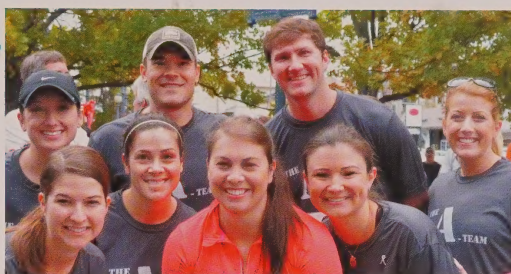
Norma Livingston Foundation Hosts Event

On September 25, the Norma Livingston Ovarian Cancer Foundation hosted a special event at The Club to benefit the Cancer Center's Division of Gynecologic Oncology. Funds raised from the "Charlie's Angels" event will be used toward creating the Brittany Waldrep Endowed Lectureship for Gynecologic Cancer, which will bring international experts in the field of GYN cancer to Birmingham to share their research with UAB physicians and scientists. Guests enjoyed an inspirational presentation by keynote speaker Edie Hand, as well as a fashion show featuring several physicians from the gynecologic oncology division.



Blazer Bolt for Brain Cancer Benefits UAB

This year's Blazer Bolt 5K was held on October 24 in downtown Homewood to benefit brain tumor research at UAB and Children's of Alabama. Several members of the Cancer Center's Young Supporters Board participated in this year's hugely successful event.



Pictured, left to right: (front row) Suzanne Alvarez, Lauren DeMoss, Danielle Downing, Mary-Margaret Brown, (back row) Ashley Foster, Joey Azar, Scott Laney, Callie Dunaway.

Cancer Center Hosts Director's Circle Reception

On September 29, the UAB Comprehensive Cancer Center hosted a reception at the UAB Alumni House to honor contributors to the Director's Circle, a fundraising initiative to introduce new donors to the work being done in cancer research and treatment at UAB. This year's Director's Circle will honor Dolly O'Neal, co-founder of the Breast Cancer Research Foundation of Alabama and former director of development for the Cancer Center, who passed away in May after a lengthy battle with breast cancer (see page 32).



CANCER CENTER SUPPORT GROUPS

NEW LIGHT

For triple negative breast cancer patients

(205) 975-7912

BRAIN BUDDIES

For patients with malignant brain tumors and their families

CATHIE ROBINSON (205) 934-2921

NEW BEGINNINGS

For newly diagnosed breast cancer patients

(205) 801-8266 or 1 (800) 333-6543

CANSURVIVE GYN CANCER SUPPORT GROUP

For ovarian, cervical and endometrial cancer patients

(205) 934-7509

LEUKEMIA AND LYMPHOMA SOCIETY PATIENT AND FAMILY SUPPORT GROUP

(205) 934-5772

SPIRITUALITY GROUP

(205) 801-7050

LOOK GOOD FEEL BETTER

(205) 502-9958

YOUNG BREAST CANCER SURVIVORS SUPPORT GROUP

For those diagnosed before the age of 45

(205) 975-8656

VISIT UAB.EDU/CANCER FOR A COMPLETE LISTING

In Memoriam: Dolly Ashton O'Neal

APRIL 9, 1950 – MAY 18, 2015

"I wanted to make my experience with cancer into something positive. I found my passion, and I didn't know what it was until I had cancer. Because of that, cancer made me a better person."

The UAB Comprehensive Cancer Center mourns the loss of Dolly O'Neal, co-founder of the Breast Cancer Research Foundation of Alabama and former Director of Development at the Cancer Center, who passed away on May 18 after a lengthy battle with breast cancer.

Dolly was first diagnosed with breast cancer in 1994. Shortly after her remission, she co-founded the BCRFA with her friend Bruce Sokol. She served as BCRFA president for many years, helping it become the Cancer Center's largest annual contributor. As the Cancer Center's development director, she raised millions of dollars for research and patient care. Her signature project was the Rays of Hope campaign, which raised funds to build the Hazelrig-Salter Radiation Oncology Center.

In 2009, Dolly had her first recurrence with breast cancer, but was able to put the disease in remission thanks to a drug that was developed using BCRFA funds. As Dolly often said, she considered herself "the poster girl for cancer research."

Despite a third recurrence in 2013, Dolly continued to fight and raise money for research. She was honored by the University of Alabama Board of Trustees in 2012 with the establishment of the O'Neal-Sokol Breast Cancer Research Foundation of Alabama Endowed Professorship, which recently became an endowed chair (see page 29).

Dolly is survived by her husband of 37 years, Bert, her sons Bert Jr. (Susanne) and Camper (Mary Chollet), her daughter Amy Stevens (Johnathon), and her grandchildren Addison Grace O'Neal, Ella Louise O'Neal, Bert O'Neal III, Chollet Perry O'Neal, Edwin Camper O'Neal, Jr., and Johnathon Harold Stevens.



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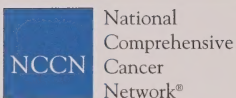
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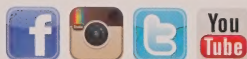


U A B C O M P R E H E N S I V E C A N C E R C E N T E R



The National Comprehensive Cancer Network (NCCN), an alliance of 26 of the world's leading cancer centers, is an authoritative source of information to help patients and health professionals make informed decisions about cancer care. Through the collective expertise of its member institutions, the NCCN develops, updates and disseminates a complete library of clinical practice guidelines. These guidelines are the standard for clinical policy in oncology.

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